

WHAT IS CLAIMED IS:

1. A fixing apparatus comprising:

a first rotatable member having an endless configuration;

5 a second rotatable member in pressure contact with said first rotatable member, said second rotatable member causing a recording material bearing an image to be nipped and conveyed at a pressure contact portion between said first and second
10 rotatable members;

temperature raising means for raising temperature of a local portion of said first rotatable member by reception of supply of electric power;

15 temperature detecting means for detecting temperature of a location different from said pressure contact portion with respect to a rotational direction of said first rotatable member;

first control means for feedback-controlling
20 electric power to be supplied to said temperature raising means based on the temperature detected by said temperature detecting means;

setting means for variably setting a set value corresponding to electric power to be supplied to
25 said temperature raising means, based on a temperature rise speed detected by said temperature detecting means when a predetermined amount of

electric power is supplied; and

second control means for temporally supplying electric power corresponding to the set value set by said setting means to said temperature raising means
5 in timing close to timing in which the temperature detected by said temperature detecting means reaches a target temperature, or timing close to timing in which the recording material rushes in said pressure contact portion when said fixing apparatus is started
10 up.

2. A fixing apparatus according to claim 1, wherein time t of period for which said second control means is operated is represented by $t \leq (a + L) / V$ where V is a moving speed of an outer
15 circumference of said first rotatable member, a is a length of said first rotatable member from said pressure contact portion to said temperature detection location, and L is an outer circumferential
20 length of said first rotatable member.

3. A fixing apparatus according to claim 1 or 2, wherein said temperature raising means includes a heater to be heated by supply of electric power,
25 which is provided close to said pressure contact portion, or a coil for generating magnetic field due to supply of electric power and causing eddy current

to occur in said first rotatable member, which is provided close to said pressure contact portion.

4. A fixing apparatus according to claim 1 or 2,
5 further comprising a nonvolatile memory for storing a value corresponding to the temperature rise speed detected by said temperature detecting means when the predetermined amount of electric power is supplied, and the set value set by said setting means.

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5. An image forming apparatus in which an image is formed on a recording material, and the image on the recording material is fixed using said fixing apparatus recited in claim 1 or 2.

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6. A fixing apparatus according to claim 1 or 2, further comprising first judging means for judging a heat storage condition of said fixing apparatus, and wherein said setting means variably sets the set
20 value corresponding to electric power to be supplied to said temperature raising means, based on a judgment result obtained by said first judging means, and the temperature rise speed detected by said temperature detecting means when the predetermined
25 amount of electric power is supplied.

7. A fixing apparatus according to claim 1 or 2,

further comprising second judging means for judging the kind of the recording material, and wherein said setting means variably sets the set value corresponding to electric power to be supplied to said temperature raising means, based on a judgment result obtained by said second judging means, and the temperature rise speed detected by said temperature detecting means when the predetermined amount of electric power is supplied.

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8. A fixing apparatus comprising:

a first rotatable member having an endless configuration;

a second rotatable member in pressure contact with said first rotatable member, said second rotatable member for causing a recording material bearing an image to be nipped and conveyed at a pressure contact portion between said first and second rotatable members;

20 temperature raising means for raising temperature of a local portion of said first rotatable member by reception of supply of electric power;

25 first temperature detecting means for detecting temperature of a location different from said pressure contact portion with respect to a rotational direction of said first rotatable member;

second temperature detecting means provided near
said pressure contact portion;

first control means for feedback-controlling
electric power to be supplied to said temperature
5 raising means based on the temperature detected by
said first temperature detecting means;

setting means for variably setting a set value
corresponding to electric power to be supplied to
said temperature raising means, based on a
10 temperature rise speed detected by said second
temperature detecting means when a predetermined
amount of electric power is supplied; and

second control means for temporally supplying
electric power corresponding to the set value set by
15 said setting means to said temperature raising means
in timing close to timing in which the temperature
detected by said temperature detecting means reaches
a target temperature, or timing close to timing in
which the recording material rushes in said pressure
20 contact portion when said fixing apparatus is started
up.

9. A fixing apparatus according to claim 8,
wherein time t of period for which said second
25 control means is operated is represented by $t \leq (a + L) / V$ where V is a moving speed of an outer
circumference of said first rotatable member, a is a

length of said first rotatable member from said pressure contact portion to said temperature detection location, and L is an outer circumferential length of said first rotatable member.

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10. A fixing apparatus according to claim 8 or 9, wherein said temperature raising means includes a heater to be heated by supply of electric power, which is provided close to said pressure contact
10 portion, or a coil for generating magnetic field due to supply of electric power and causing eddy current to occur in said first rotatable member, which is provided close to said pressure contact portion.

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11. A fixing apparatus according to claim 8 or 9, further comprising a nonvolatile memory for storing the set value set by said setting means.

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12. An image forming apparatus in which an image is formed on a recording material, and the image on the recording material is fixed using said fixing apparatus recited in claim 8 or 9.

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13. A fixing apparatus according to claim 8 or 9, further comprising first judging means for judging a heat storage condition of said fixing apparatus, and wherein said setting means variably sets the set

value corresponding to electric power to be supplied
to said temperature raising means, based on a
judgment result obtained by said first judging means,
and the temperature rise speed detected by said
5 temperature detecting means when the predetermined
amount of electric power is supplied.

14. A fixing apparatus according to claim 8 or
9, further comprising a second judging means for
10 judging the kind of the recording material, and
wherein said setting means variably sets the set
value corresponding to electric power to be supplied
to said temperature raising means, based on a
judgment result obtained by said second judging means,
15 and the temperature rise speed detected by said
temperature detecting means when the predetermined
amount of electric power is supplied.